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~~37~~. (NEW) A polynucleotide encoding a chimeric enzyme comprising:
a) a localization signal of an alpha-1,3 galactosyl transferase enzyme;
b) a catalytic domain of a fucosyl transferase that competes with the galactosyltransferase for substrate.

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~~38~~. (NEW) The polynucleotide of claim ¹~~36~~, wherein the fucosyl transferase is H-transferase or secretor-type alpha-1,2 fucosyl transferase.

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~~39~~. (NEW) The polynucleotide of claim ⁸~~37~~, wherein the fucosyl transferase is H-transferase or secretor-type alpha-1,2 fucosyl transferase.

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~~40~~. (NEW) The polynucleotide of claim ¹~~38~~, wherein the glycosyltransferase localization signal comprises a cytoplasmic domain of a glycosyltransferase.

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~~41~~. (NEW) The polynucleotide of claim ⁸~~39~~, wherein the localization signal comprises a cytoplasmic domain of a glycosyltransferase.

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~~42~~. (NEW) The polynucleotide of claim ¹~~40~~, wherein the localization signal is MNVKGR (SEQ. ID. No. 11), MNVKGK (SEQ. ID. No. 12), or MVVKGK (SEQ. ID. No. 13).

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~~43~~. (NEW) The polynucleotide of claim ⁸~~41~~, wherein the localization signal is MNVKGR (SEQ. ID. No. 11), MNVKGK (SEQ. ID. No. 12), or MVVKGK (SEQ. ID. No. 13).

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~~44~~. (NEW) A vector comprising the polynucleotide of claim ¹~~42~~.

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~~45~~. (NEW) A vector comprising the polynucleotide of claim ⁸~~43~~.

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~~46~~. (NEW) The vector of claim ⁵~~44~~, wherein the fucosyl transferase is H-transferase or secretor-type alpha-1,2 fucosyl transferase.

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~~47~~. (NEW) The vector of claim ¹²~~45~~, wherein the fucosyl transferase is H-transferase or

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secretor-type alpha-1,2 fucosyl transferase.

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~~48~~. (NEW) A method for reducing an amount of gal-alpha- (1,3)- gal present on cells comprising:

- a) transducing the cells with a chimeric enzyme comprising:
 - i) a glycosyltransferase localization signal directing localization of the chimeric enzyme to the Golgi; and
 - ii) a catalytic domain of a fucosyl transferase that competes with galactosyltransferase for substrate;
- b) expressing the chimeric enzyme in the cells, wherein the expression of the chimeric enzyme in the cells is effective to reduce the amount of gal-alpha- (1,3)- gal present on the cells.

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~~49~~. (NEW) A method for reducing an amount of gal-alpha- (1,3)- gal present on cells comprising:

- a) transducing the cells with a chimeric enzyme comprising:
 - i) a localization signal of an alpha- 1,3 galactosyl transferase directing localization of the chimeric enzyme to the Golgi; and
 - ii) a catalytic domain of a fucosyl transferase that competes with galactosyltransferase for substrate;
- b) expressing the chimeric enzyme in the cells, wherein the expression of the chimeric enzyme in the cells is effective to reduce the amount of gal-alpha- (1,3)- gal present on the cells.

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~~50~~. (NEW) The method of claim ¹⁵~~48~~, wherein the fucosyl transferase is H-transferase or secretor-type alpha-1,2 fucosyl transferase.

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~~51~~. (NEW) The method of claim ¹⁸~~49~~, wherein the fucosyl transferase is H-transferase or secretor-type alpha-1,2 fucosyl transferase.

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~~52~~. (NEW) A method of claim ¹⁵~~48~~, wherein said transforming is *ex vivo*.

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~~53~~. (NEW) A method of claim ¹⁸~~48~~, wherein said transforming is *ex vivo*.

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~~54~~. (NEW) A method for reducing hyperacute rejection of transplanted porcine cells comprising transforming the cells with the polynucleotide of claim ³⁸~~38~~ prior to transplantation, wherein expression of the chimeric enzyme is effective to reduce gal-alpha- (1,3)- gal present on the cells.

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~~55~~. (NEW) A method for reducing hyperacute rejection of transplanted porcine cells comprising transforming the cells with the polynucleotide of claim ⁸¹~~81~~ prior to transplantation, wherein expression of the chimeric enzyme is effective to reduce gal-alpha- (1,3)- gal present on the cells.

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